

AMENDMENTS TO THE CLAIMS:

Kindly amend claims 1 and 9, as shown below.

This listing of claims will replace all prior versions and listings of claims in the
Application:

Claim 1 (currently amended): A driving method for a color liquid crystal display
comprising:

supplying, to a separate gamma compensating circuit for each a red video signal, a
green video signal and a blue video signal, ~~[[an]]~~ independently generated reference ~~voltage~~
voltages, said reference ~~voltage~~ voltages generated based upon each a red transmittance
characteristic, a green transmittance characteristic and a blue transmittance characteristic;

applying gamma compensation using said separate gamma compensating circuit in
order to obtain each a compensated red video signal, a compensated green video signal and a
compensated blue video signal; and

driving said color liquid crystal display based on said compensated red video signal,
said compensated green video signal and said compensated blue video signal,

wherein said reference voltages are generated to provide optimum gamma
compensation based on the luminosity characteristics of each color.

Claim 2 (withdrawn): The driving method for the color liquid crystal display
according to Claim 1, wherein said gamma compensations are applied using a common voltage
or a common data to said video red signal, said video green signal and said video blue signal
corresponding to an area in which said red transmittance characteristic, said green
transmittance characteristic and said blue transmittance characteristic for said applied voltage
for said color liquid crystal display become an approximate similar characteristic curve.

Claim 3 (original): The driving method for the color liquid crystal display according to Claim 1, wherein voltages or data used for said gamma compensations are independently set in an area from a minimum transmittance to a maximum transmittance of each of said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said applied voltage for said color liquid crystal display.

Claim 4 (original): The driving method for the color liquid crystal display according to Claim 3, wherein said voltages or said data are independently changeable.

Claim 5 (previously presented): A driving method for a color liquid crystal display comprising:

applying gamma compensation to a red signal, a green signal and a blue signal using separate gamma compensating circuits for each of said signals, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image to an input image luminescence and a second gamma compensation of said signals conforming to a red transmittance characteristic, a green transmittance characteristic and a blue transmittance characteristic of a red video signal, a green video signal and a blue video signal, respectively; and

driving said color liquid crystal display based on said compensated red video signal, said compensated green video signal and said compensated blue video signal,

wherein said second gamma compensation is performed by supplying reference voltages to each of said plurality of gamma compensating circuits, said reference voltage specific to said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic, in order to obtain a compensated red video signal, a compensated green video signal and a compensated blue video signal.

Claim 6 (withdrawn): The driving method for the color liquid crystal display according to Claim 5, wherein said gamma compensations are applied using a common voltage or a common data to said video red signal, said video green signal and said video blue signal corresponding to an area in which said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said applied voltage for said color liquid crystal display become an approximate similar characteristic curve.

Claim 7 (original): The driving method for the color liquid crystal display according to Claim 5, wherein voltages or data used for said gamma compensations are independently set in an area from a minimum transmittance to a maximum transmittance of each of said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said applied voltage for said color liquid crystal display.

Claim 8 (original): The driving method for the color liquid crystal display according to Claim 7, wherein said voltages or said data are independently changeable.

Claim 9 (currently amended): A driving circuit for a color liquid crystal display comprising:

a first gamma compensating circuit for applying a gamma compensation only to a red video signal so as to be suitable only for a red transmittance characteristic for an independently applied voltage in said color liquid crystal display and for outputting only a compensated red video signal;

a second gamma compensating circuit for applying a gamma compensation only to a green video signal so as to be suitable only for a green transmittance characteristic for an independently applied voltage in said color liquid crystal display and for outputting only a compensated green video signal;

a third gamma compensating circuit for applying a gamma compensation only to a blue video signal so as to be suitable only for a blue transmittance characteristic for an independently applied voltage of said color liquid crystal display and for outputting only a compensated blue video signal;

a reference voltage generating circuit for supplying respectively independently generated reference voltages to said first gamma compensating circuit, said second gamma compensating circuit and said third gamma compensating circuit; and

a data electrode driving circuit for driving corresponding electrodes of said color liquid crystal display based on said compensated red video signal, said compensated green video signal and said compensated blue video signal,

wherein said reference voltages are generated to provide optimum gamma compensation based on the luminosity characteristics of each color.

Claim 10 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 9, wherein said reference voltage generating circuit supplies a common reference voltage to said video red signal, said video green signal and said video blue signal corresponding an area in which said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said applied voltage in said color liquid crystal display become an approximate similar characteristic curve.

Claim 11 (previously presented): The driving circuit for the color liquid crystal display according to Claim 9, wherein said reference voltages are independently set for each area from a minimum transmittance to a maximum transmittance in each of said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said independently applied voltages in said color liquid crystal display.

Claim 12 (original): The driving circuit for the color liquid crystal display according to Claim 11, wherein said reference voltages are independently changeable.

Claim 13 (previously presented): A driving circuit for a color liquid crystal display comprising:

a first gamma compensating circuit for applying a gamma compensation only to a red video signal, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said red video signal so as to be suitable only for a red transmittance characteristic for an independently applied voltage in said color liquid crystal display and for outputting only a compensated red video signal;

a second gamma compensating circuit for applying a gamma compensation only to a green video signal, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said green video signal so as to be suitable only for a green transmittance characteristic for an independently applied voltage of said color liquid crystal display and for outputting only a compensated green video signal;

a third gamma compensating circuit for applying a gamma compensation only to a blue video signal, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said blue video signal so as to be suitable only for a blue transmittance characteristic for an independently applied voltage of said color liquid crystal display and for outputting only a compensated blue video signal;

a reference voltage generating circuit for supplying respectively independently generated reference voltages to said first gamma compensating circuit, said second gamma compensating circuit and said third gamma compensating circuit; and

a data electrode driving circuit for driving corresponding electrodes in said color liquid crystal display based on said compensated red video signal, said compensated green video signal and said compensated blue video signal.

Claim 14 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 13, wherein said reference voltage generating circuit supplies a common reference voltage to said video red signal, said video green signal and said video blue signal corresponding an area in which said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said applied voltage in said color liquid crystal display become an approximate similar characteristic curve.

Claim 15 (previously presented): The driving circuit for the color liquid crystal display according to Claim 13, wherein said reference voltages are independently set for each area from a minimum transmittance to a maximum transmittance in each of said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said independently applied voltages in said color liquid crystal display.

Claim 16 (original): The driving circuit for the color liquid crystal display according to Claim 15, wherein said reference voltages are independently changeable.

Claim 17 (withdrawn): A driving circuit for a color liquid crystal display comprising:
a gradation power supply circuit for generating a plurality of red gradation voltages, a plurality of green gradation voltages and a plurality of blue gradation voltages used for independently applying a gamma compensation to a video red signal, a video green signal and a

video blue signal in order to compensate said video red signal, said video green signal and said video blue signal so as to be suitable to a red transmittance characteristic, a green transmittance characteristic and a blue transmittance characteristic for an applied voltage in said color liquid crystal display; and

a data electrode driving circuit for applying a data red signal, a data green signal and a data blue signal obtained by applying said gamma compensation to said red data, said green data and said blue data and by analog-converting said red data, said green data and said blue data based said plurality of red gradation voltages, said plurality of green gradation voltages and said plurality of blue gradation voltages to corresponding data electrodes of said color liquid crystal display.

Claim 18 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 17, wherein said gradation power supply circuit generates a common gradation voltage to said video red signal, said video green signal and said video blue signal corresponding an area in which said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said applied voltage in said color liquid crystal display become an approximate similar characteristic curve.

Claim 19 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 17, wherein said plurality of red gradation voltages, said plurality of green gradation voltages and said plurality of blue gradation voltages are independently set for each area from a minimum transmittance to a maximum transmittance in each of said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said applied voltage in said color liquid crystal display.

Claim 20 (withdrawn): The driving circuit for the color liquid crystal display

according to Claim 17, wherein said plurality of red gradation voltages, said plurality of green gradation voltages and said plurality of blue gradation voltages are independently changeable.

Claim 21 (withdrawn): A driving circuit for a color liquid crystal display comprising:
a gradation power supply circuit for generating a plurality of red gradation voltages, a plurality of green gradation voltages and a plurality of blue gradation voltages used for independently applying a gamma compensation to a video red signal, a video green signal and a video blue signal, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said video blue signal so as to be suitable to a blue transmittance characteristic for an applied voltage of said color liquid crystal display; and

a data electrode driving circuit for applying a data red signal, a data green signal and a data blue signal obtained by applying said gamma compensation to said red data, said green data and said blue data and by analog-converting said red data, said green data and said blue data based said plurality of red gradation voltages, said plurality of green gradation voltages and said plurality of blue gradation voltages to corresponding data electrodes of said color liquid crystal display.

Claim 22 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 21, wherein said gradation power supply circuit generates a common gradation voltage to said video red signal, said video green signal and said video blue signal corresponding an area in which said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said applied voltage in said color liquid crystal display become an approximate similar characteristic curve.

Claim 23 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 21, wherein said plurality of red gradation voltages, said plurality of green gradation voltages and said plurality of blue gradation voltages are independently set for each area from a minimum transmittance to a maximum transmittance in each of said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for said applied voltage in said color liquid crystal display.

Claim 24 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 21, wherein said plurality of red gradation voltages, said plurality of green gradation voltages and said plurality of blue gradation voltages are independently changeable.

Claim 25 (withdrawn): A driving circuit for a color liquid crystal display comprising:
a first gamma compensating section for applying a gamma compensation to a digital video red signal, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said digital video red signal so as to be suitable to a red transmittance characteristic for an applied voltage of said color liquid crystal display and for outputting a compensated digital video red signal;

a second gamma compensating section for applying a gamma compensation to a digital video green signal, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said digital video green signal so as to be suitable to a green transmittance characteristic for an applied voltage in said color liquid crystal display and for outputting a compensated digital video green signal;

a third gamma compensating section for applying a gamma compensation to a digital

video blue signal, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said digital video blue signal so as to be suitable to a blue transmittance characteristic for an applied voltage of said color liquid crystal display and for outputting a compensated digital video blue signal; and

a data electrode driving circuit for applying a data red signal, a data green signal and a data blue signal obtained by analog-converting said compensated red data, said compensated green data and said blue data to corresponding electrodes of said color liquid crystal display.

Claim 26 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 25, wherein said first gamma compensating section, said second gamma compensating section and said third gamma compensating section apply said gamma compensation to said red data, said green data and said blue data by operation processes.

Claim 27 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 25, wherein said first gamma compensating section, said second gamma compensating section and said third gamma compensating section previously hold said compensated red data, said compensated green data and said compensated blue data which are results of said gamma compensation corresponding to said red data, said green data and said blue data and said compensated red data, said compensated green data and said compensated blue data are read using said red data, said green data and said blue data as reference addresses so as to be corresponded in order to apply said gamma compensation.

Claim 28 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 25, wherein said first gamma compensating section, said second gamma compensating section and said third gamma compensating section independently apply said

gamma compensation in each area from a minimum transmittance to a maximum transmittance of each of a red transmittance characteristic, a green transmittance characteristic and a blue transmittance characteristic for said applied voltage of said color liquid crystal display.

Claim 29 (withdrawn): A driving circuit for a color liquid crystal display comprising:

a first gamma compensating section for applying a gamma compensation to a digital video red signal, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said digital video red signal so as to be suitable to a red transmittance characteristic for an applied voltage of said color liquid crystal display, said second gamma compensation including a second gamma slight compensation of executing a compensation caused by a difference among a red characteristic, a green characteristic and a blue characteristic and for outputting a compensated video red signal;

a second gamma compensating section for applying a gamma compensation to a digital video green signal, said gamma compensation including a first gamma compensation of voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said digital video green signal to be suitable to a green transmittance characteristic for an applied voltage of said color liquid crystal display, said second gamma compensation including a second gamma slight compensation of executing a compensation caused by a difference among said red characteristic, said green characteristic and said blue characteristic and for outputting a compensated digital video green signal;

a third gamma compensating section for applying a gamma compensation to a digital video blue signal, said gamma compensation including a first gamma compensation of

voluntarily giving a luminance characteristic of a reproduced image for an input image luminance and a second gamma compensation of compensating said digital video blue signal to be suitable to a blue transmittance characteristic for an applied voltage of said color liquid crystal display, said second gamma compensation including a second gamma slight compensation of executing a compensation caused by a difference among a red characteristic, a green characteristic and a blue characteristic and for outputting a compensated digital video blue signal;

a gradation power supply circuit for generating a plurality of red gradation voltages, a plurality of green gradation voltages and a plurality of blue gradation voltages used to apply a second gamma rough compensation caused by a similarity among said red characteristic, said green characteristic and said blue characteristic to said compensated red data, said compensated green data and said compensated blue data included in said second gamma compensation making suitable to said red transmittance characteristic, said green transmittance characteristic and said blue transmittance characteristic for an applied voltage of said color liquid crystal display; and

a data electrode driving circuit for applying a data red signal, a data green signal and a data blue signal obtained by applying said gamma rough compensation to said compensated red data, said compensated green data and said compensated blue data and by analog-converting said compensated red data, said compensated green data and said compensated blue data based on said plurality of red gradation voltages, said plurality of green gradation voltages and said plurality of blue gradation voltages to corresponding electrodes of said color liquid crystal display.

Claim 30 (withdrawn): The driving circuit for the color liquid crystal display

according to Claim 29, wherein said first gamma compensating section, said second gamma compensating section and said third gamma compensating section apply said gamma compensation to said red data, said green data and said blue data by operation processes.

Claim 31 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 29, wherein said first gamma compensating section, said second gamma compensating section and said third gamma compensating section previously hold said compensated red data, said compensated green data and said compensated blue data which are results of said gamma compensation corresponding to said red data, said green data and said blue data and said compensated red data, said compensated green data and said compensated blue data are read using said red data, said green data and said blue data as reference addresses so as to be corresponded in order to apply said gamma compensation.

Claim 32 (withdrawn): The driving circuit for the color liquid crystal display according to Claim 29, wherein said first gamma compensating section, said second gamma compensating section and said third gamma compensating section independently apply said gamma compensation in each area from a minimum transmittance to a maximum transmittance of each of a red transmittance characteristic, a green transmittance characteristic and a blue transmittance characteristic for said applied voltage of said color liquid crystal display.

HAYES SOLOWAY P.C.
130 W. CUSHING STREET
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567